

**1 In th Claims**

1. (previously amended) In a multi-ply wood structure shear connection including a wood screw fastener and a plurality of wood structural members
- 5 formed with a first bore comprising; said wood screw fastener including:
  - a. a shank having a head end;
  - b. a pointed end portion formed on an entering extremity of said shank opposite said head end for insertion through said first bore in said wood structural members;
  - 10 c. said shank having a threaded shank portion having thread convolutions with an outer diameter greater than the diameter of said first bore and beginning at a first point adjacent said pointed end portion and extending axially along the periphery of said shank to a second point and adapted to form and engage threads in said wood structural members;
  - 15 d. said shank having a knurled portion formed with a plurality of knurls having dull edges and having a first point adjacent said second point of said threaded shank portion and extending axially along said shank to a second point and having an outside diameter generally equal to the outer diameter of said thread convolutions in said threaded shank portion and having an inside diameter substantially less than said outside diameter of said knurled portion and equal to or only slightly greater than the diameter of said first bore;
  - 20 e. said knurls are formed with a tapered entering portion forming a smooth transition between the inner diameter of said shank and said outside diameter of said knurled portion;
  - 25 f. said shank having an unthreaded shank portion having a diameter generally equal to said outside diameter of said knurled portion and having a first point adjacent said second point of said knurled portion and extending axially along said shank a distance substantially greater than the length of said knurled portion and terminating at a second point adjacent said head end;
  - 30 g. said knurls having said dull edges bend over buckle and crush without severing, a substantial proportion of the wood fibers of the inner portions of said threads formed in said wood structural members forming a nominal annular zone of bent over buckled and crushed
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- 1 wood fibers, having an outer diameter nominally greater than said  
diameter of said unthreaded shank portion and forming a tight fit  
between said unthreaded shank portion and said nominal annular zone  
of bent over buckled and crushed wood fibers, of said wood  
5 structural members;
- h. a head integrally connected to said shank at said head end; and  
l. said unthreaded shank portion extending a substantial distance  
within said wood structural members.
- 10 2. (previously amended) In a multi-ply wood structure shear connection  
including a plurality of wood screw fastener and a plurality of wood  
structural members comprising; said screw fastener including,
- a. a shank having a head end;
- 15 b. a pointed end portion formed on an entering extremity of said  
shank, opposite said head end, having a plurality of thread  
convolutions and a recess providing a cutting edge for forming a first  
bore in said wood structural members and having a selected outer  
diameter;
- 20 c. said shank having a threaded shank portion having thread  
convolutions similar to said thread convolutions on said pointed end  
portion with an outer diameter greater than said diameter of said first  
bore and beginning at a first point adjacent said pointed end portion  
and extending axially along the periphery of said shank to a second  
end point and adapted to form and engage threads in said wood  
25 structural members;
- d. said shank having a knurled portion formed with a plurality of  
knurls having dull edges and having a first point adjacent said second  
point of said threaded shank portion and extending axially along said  
shank to a second point and having an outside diameter generally  
30 equal to the outer diameter of said thread convolutions in said  
threaded shank portion and having an inside diameter substantially  
less than said outside diameter of said knurled portion and equal to or  
only slightly greater than the diameter of said first bore;
- 35 e. said knurls are formed with a tapered entering portion forming a  
smooth transition between the inner diameter of said shank and said  
outside diameter of said knurled portion;

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- 1 f. said shank having an unthreaded shank portion having a diameter  
generally equal to said outside diameter of said knurled portion and  
having a first point adjacent said second point of said knurled portion  
5 and extending axially along said shank a distance substantially greater  
than the length of said knurled portion and terminating at a second  
point adjacent said head end;  
g. said knurls having said dull edges bend over, buckle and crush  
without severing, a substantial proportion of the wood fibers of the  
inner portions of said threads formed in said wood structural members  
10 forming a nominal annular zone of bent over, buckled and crushed,  
wood fibers having an outer diameter nominally greater than said  
diameter of said unthreaded shank portion and forming a tight fit  
between said unthreaded shank portion and said nominal annular zone  
of bent over, buckled and crushed wood fibers of said wood structural  
15 members;  
h. a head integrally connected to said shank at said head end; and  
i. said unthreaded shank portion extending a substantial distance  
within said wood structural members.
- 20 3. (original) In a multi-ply wood structure including a wood screw fastener  
and a plurality of wood structural members as described in claim 1 wherein:  
a. said wood structural members are trusses having at least one wood  
member for receipt of said screw.
- 25 4. (original) In a multi-ply wood structure including a wood screw fastener  
and a plurality of wood structural members as described in claim 2 wherein:  
a. said wood structural members are trusses having at least one wood  
member for receipt of said screw.
- 30 5. (original) In a multi-ply wood structure including a wood screw fastener  
and a plurality of wood structural members as described in claim 1 wherein:  
a. said wood structural members are wood beams.

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- 1 6. (original) In a multi-ply wood structure including a wood screw fastener  
and a plurality of wood structural members as described in claim 2 wherein:  
a. said wood structural members are wood beams.
- 5 7. (original) In a multi-ply wood structure including a wood screw fastener  
and a plurality of wood structural members as described in claim 3 wherein:  
a. said wood trusses are roof trusses.
8. (original) In a multi-ply wood structure including a wood screw fastener  
10 and a plurality of wood structural members as described in claim 4 wherein:  
a. said wood trusses are roof trusses.
9. (new) A multi-ply wood structure shear connection comprising:
- 15 a. a plurality of wood structural members, said wood structural  
members being trusses each having a plurality of wood chords,  
wherein at least one of said wood chords extends parallel and adjacent  
to a chord of another of said trusses, and said adjacent chords are  
20 formed with a first bore and are joined by a first wood screw fastener  
for sistering said wood chords to share loads, said wood screw  
fastener including:
- 25 i. a shank having a head end;  
ii. a pointed end portion formed on an entering extremity of said  
shank opposite said head end for insertion into said first bore in  
said wood structural members;
- 30 iii. said shank having a threaded shank portion having thread  
convolutions with an outer diameter greater than the diameter  
of said first bore and beginning at a first point adjacent said  
35 pointed end portion and extending axially along the periphery of

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1           said shank to a second point and adapted to form and ngag  
          threads in said wood structural member; and  
          iv. a head integrally connected to said shank at said head end.

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10. (new) The multi-ply wood structure shear connection of claim 9  
wherein:

10           a. said wood screw fastener is at right angles to said chords.

11. (new) The multi-ply wood structure shear connection of claim 10

15           wherein:

          a. said head is in direct contact with one of said chords.

12. (new) The multi-ply wood structure shear connection of claim 11

20           wherein:

          a. said trusses are roof trusses.

25 13. (new) A multi-ply wood structure shear connection comprising:

          a. a plurality of wood structural members, said wood structural  
          members being trusses each having a plurality of wood chords,  
          wherein at least one of said wood chords extends parallel and adjacent  
          to a chord of another of said trusses, and said adjacent chords are  
          joined by a plurality of wood screw fasteners for sistering said wood  
          chords to share loads, said wood screw fastener including:

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          i. a shank having a head end;

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1 ii. a pointed end portion formed on an entering extremity of said  
shank, opposite said head end, having a plurality of thread  
convolutions and a recess providing a cutting edge for forming a  
5 first bore in said wood structural members and having a  
selected outer diameter;

10 iii. said shank having a threaded shank portion having thread  
convolutions similar to said thread convolutions on said pointed  
end portion with an outer diameter greater than said diameter of  
said first bore and beginning at a first point adjacent said  
15 pointed end portion and extending axially along the periphery of  
said shank to a second end point and adapted to form and  
engage threads in said wood structural members; and  
iv. a head integrally connected to said shank at said head end.

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14. (new) The multi-ply wood structure shear connection of claim 14  
wherein:

25 a. said wood screw fasteners are at right angles to said chords.

15. (new) The multi-ply wood structure shear connection of claim 15

30 wherein:

a. said head is in direct contact with one of said chords

16. (new) The multi-ply wood structure shear connection of claim 16

35 wherein:

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1 a. said truss s ar roof trusses.

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